ABSTRACT

The present invention discloses a method for detecting orthogonal code CDMA signal implemented mainly through the following steps: estimating the total power of interference to the multi-path signals; performing matched filtering on the multi-path signals and performing maximum ratio combining on the multi-path signals by utilizing the total power of interference to the multi-path signals, to obtain the optimized matched filtering result; and performing joint detection on the optimized matched filtering result. There are two schemes for implementing: if the optimized matched filtering detection scheme is used, only the first two main steps are executed; if the joint detection scheme is used, all of the three steps are executed. In either of above two schemes, the interference code channels involved in the estimation of total power of interference to the multi-path signals are need to be selected, i.e., all of the code channels in the serving cell or the code channels in the serving cell which are not performed joint detection on are selected. As the present invention takes full advantage of the characteristic of orthogonal code as well as the channel estimation result, system performance can be improved at a lower price. The present invention is especially suitable for terminal devices in an orthogonal code Code Division Multiple Access system.